

February 15, 1992 <sup>1993</sup>

State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Attn: Mr. D. Wayne Hedberg  
Permit Supervisor

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FEB 17 1993

DIVISION OF  
OIL GAS & MINING

Dear Mr. Hedberg:

In response to your "Tentative Approval" letter of August 20, 1992, please find the following supplemental information:

**R613-1-102.3:- Compliance with Other Local, State and Federal Agencies**

- ✓ 1. An archeological inventory and clearance was completed by Mike Young, BLM Reality Specialist, and Apryll Killpack, seasonal Recreational Aide, in 1979. This survey was done on the patented and unpatented mining claims lying on BLM land north and west of State Sections 2 and 36. Approximately 50% of the total disturbed ground lies within the surveyed area. No paleontological or cultural values were found.

The Division of State Lands and Forestry has been contacted and asked to determine whether or not an additional archeological survey is needed at the new "West" waste dump location. No determination has yet been made as of this date.

**R613-004-106:- Operation Plan**

**106.8 - Depth to groundwater, overburden material & geologic setting**

- ✓ 1. Groundwater level within the permit area is unknown at this time. No seeps or springs are evident in the near vicinity of the quarry operations and no groundwater has ever been encountered in any of the blast holes at the quarry. Continental Lime Inc. has no additional information or records on any wells or drill holes that may have been drilled prior to

their acquisition of State Leases or staking of mining claims and, to the best of their knowledge, none exist.

Elevation at the quarry site ranges from 5400' to 6100'. Elevation at the mill(plant) site is approximately 4800'. A 460' deep water well at the plant location encountered approximately 25 to 50 gpm of brackish, saline water flowing into the well from a zone 50' deep to 460' deep. This well was drilled in alluvial sand and silt. Fine sand from this zone has been a caused abnormal wear on the well pump resulting in high maintenance costs. Water from this well is used only for dust control and process needs at the kiln plant.

A new well was recently drilled to a depth of 3000' feet in an attempt to find a better source of water. To eliminate the infiltration of fine sand, the top 1200' of this well has been cased with 9" diameter solid casing. Below 1200' the alluvial deposits become coarser ranging from coarse sand to fine gravel. Water seeps into the well from a zone 1200' deep to 3000' deep. Bedrock was not encountered in this well. Preliminary tests indicate that 130 to 150 gpm of water may be produced from this well but water quality will still limit its use to dust control and process applications.

The only other known source of groundwater is at "Candland Spring" located approximately 3½ miles north of the "West" waste dump. Seepage from this spring occurs at an elevation of 5800'. Due to the distance from the proposed waste dump and the fact that this seepage occurs in a completely separate and different geologic unit, no impact is expected from the mining operations within the permitted areas.

2. The geologic setting at the quarry site is of Middle Cambrian Age. The area of development lies within the Cricket Mountains which is part of the Basin and Range province in west-central Utah.

The quarry site ranges in elevation from 5,500 to 6,100 feet in elevation. The base of the Poison Mountain outcrop area slopes gently to the east and west. Alluvial and colluvial sedimentary deposits of Quaternary Age cover these areas and consist of loamy sand to rounded pebble-sized and cobble-sized rock fragments.


The Cambrian Limestone sequence consists of four stratigraphic units listed in descending chronological order:

Marjum Formation	-	Dark gray limestone and shaly limestone, locally dolomitic
Swasey Limestone	-	Dark massive limestone
Whirlwind Formation	-	Limey shale and shale with small limestone beds.
Dome Limestone	-	Light gray massive limestone

The high-grade limestone is quarried principally from the Dome Limestone and some from the Swasey Limestone. The overburden, low-grade limestone and shale units are from the Swasey Limestone and the Marjum and Whirlwind formations. Some faulting occurs within the quarry site.


#### **R613-004-107- Operations Practices**

##### **107.1.12 - Disposal of trash, debris**

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1. Due to the small number of employees at this location, very little disposable trash and debris is generated. Scrap and other recyclable materials are periodically picked up and removed from the site to approved recycling centers or disposal sites. A small amount of burnable trash is incinerated at the kiln plant site and the balance of trash and debris is disposed of by burial in a small area adjacent to the kiln plant.

#### **R613-004-109- Impact Assessment**

##### **109.1 - Surface & groundwater systems**

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1. The operator is not aware of any groundwater impacts that could arise as a result of placing overburden material in the "West" waste dump. No groundwater has been encountered in the quarry operations to-date and none is expected.

Surface water will be slightly impacted along the west side of the proposed waste dump due to extending the toe of the dump across a




portion of an existing drainage channel during final reclamation of the waste dump. This will be mitigated in two ways:

- the northeast corner of the dump will be configured to impound runoff as a means of sediment control and energy dissipation. This will have the added benefit of providing a short term water reservoir for indigenous wildlife in the area.
- a diversion ditch will be constructed along the west toe of the dump to carry water from the impoundment area back to the original drainage channel. This diversion ditch will be 6 feet wide at the bottom, 2½ feet deep, and 11 feet wide at the top. The ditch has been designed to carry the peak flow from the 100-year, 24 hour storm event.

A description of this surface water handling system, along with a cross sectional diagram and runoff calculations, has been incorporated into the Revised Mining and Reclamation Plan.

#### 109.2 - Wildlife habitat and endangered species

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1. No significant impact on wildlife habitat is expected by the addition of the "West" waste dump to the permit area. This conclusion is based on the fact that approximately 50% of the disturbed area is currently steep, cliff-like terrain with no known raptor nesting areas. There is also little or no topsoil in the cliff area and therefore hardly any vegetative cover is available for feed and cover. The balance of the disturbed area has a relatively low wildlife density and no animals classified as threatened or endangered have been found here. After final reclamation, the waste dump will be contoured to a 3H:1V slope and have topsoil placed on all areas. The top and slopes will be revegetated. This will ultimately provide better cover and feed than the original terrain provided.

With regard to the loss of high priority yearlong pronghorn range, yearlong chukar range, and winter high priority chukar range as commented on by the Division of Wildlife Resources, Continental Lime believes that the net effect of their revised MRP is to reduce the total disturbed area due to changing the mining plan from that originally submitted and approved. Approximately 31 acres on the east side of the quarry is no longer included in the revised MRP and will not be disturbed. However, Continental Lime is agreeable to working with the

Division of Wildlife Resources as a responsible mine operator in the interest of good resource management. Continental Lime feels that a reasonable mitigating solution to range impacts would be the installation of a guzzler or guzzler system at a cost not to exceed \$3000.

2. No significant impact to endangered species, either wildlife or vegetative, is expected by the addition of the "West" waste dump to the permit area. This is based on the fact that no animals classified as threatened or endangered have been found in this area. A small plant, Penstemon Nanus, has been found in the vicinity during the original vegetative survey done in 1979. This plant has been considered for listing as a threatened species because it was thought that it was native to only a few places in extreme west central Utah. However a subsequent inventory by the BLM and Dr. Welsh of Brigham Young University has located the plant in several other areas on the east bench of the Cricket Mountains which indicates that its range is considerable more widespread than previously suggested. This plant has not been identified in the area of the proposed waste dump and the potential for any to be destroyed is low. Additionally, the potential for destroying any of these plants is further off-set by elimination from the revised Mining and Reclamation Plan of approximately 31 acres of land along the entire east side of the quarry. This acreage was included in the original MRP but is no longer included in the revised MRP. Any plants that may exist in this area will not be disturbed by future mining activities.

#### R613-004-110 - Reclamation Plan

##### 110.5 - Revegetation planting program and topsoil redistribution


- ✓ 1. The operator will incorporate into the Revised MRP the seed mixture and seeding rate recommended by DOGM. This seed mix will be evaluated in test plots prior to extensive application. If some of the recommended species prove unsuccessful in the test plots, the mix will be amended at a later date.

## **R613-004-111- Reclamation Practices**

### **111.2 - Reclamation of natural stream channels**

1. The proposed diversion ditch is described in detail in Section **R613-004-109 - Impact Assessment**, 109.1 - Surface & groundwater systems of this letter. In addition, narrative and a cross sectional diagram have been added to the body of the plan and peak flow runoff calculations have been added to Appendix "B".

## **R613-004-112- Variance**

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1. The main access road from the plant to the mine quarry is incorrectly identified as a County road in the revised MRP. The road should have been identified as an existing roadway lying on BLM land that has historically been maintained by Millard County. A letter in Appendix "C" dated April 20, 1979 from the BLM District Manager, Richfield to the BLM State Director, Utah (U-910) summarizes the history of the access road as follows:

(para 2) "As outlined by Continental's personnel, the proposed quarry sites lie partially in Section 36 of Township 21 South, Range 10 West, and more extensively on unpatented mining claims on adjacent federal lands. Continental proposes to use an existing roadway that traverses the area as a haul road between the quarry and plant. This roadway, constructed by U.S. Steel in 1958, was originally 40 feet wide with a graveled surface and was used as a haulage road from a quarry in Section 19 of Township 21 South, Range 9 West to the rail siding at Bloom. The roadway has been maintained by Millard County, but would require some additional surfacing material....."

(para 3)...."Because the proposed quarry sites are located on unpatented mining claims, Continental Lime has a statutory right to work those claims and is not subject to our environmental assessment requirements. We have also researched court decisions and solicitor's opinions relating to ingress and egress to mining claims. Continental Lime has requested a non-exclusive right to use the roadway between the quarry and the plant. The Koenig Decision (IBLA 71-205) and Solicitor's Opinion M-36584 emphasize that claimants have a non-exclusive right of access across public lands as a means of removing their minerals. These rights of ingress and egress were reaffirmed in Section 302 of the FLPMA....."

February 15, 1993

To: Mr. D. Wayne Hedberg - DOGM  
Mr. Russ Dobson - Continental Lime Inc., Cricket Plant  
Continental Lime Inc. - Salt Lake City Office

From: D. J. Krohn

Subject: **AMENDED PAGES FOR REVISED MRP - REVISED FEB. 1992**

Please insert amended page 14, 18 and 20 through 34 into Continental Lime Inc. Mining and Reclamation Plan, Revised February 1992. Throw away the old pages.

Also insert the attached run-off calculations and drainage area sketch into the front of Appendix "B"

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